Kulibert-Lake Michigan District

To Buchanan
Lehrer.

March 15, 1976

4410

Mr. Theodore J. Harris
Harris & Associates
2718 N. Meade Street
Appleton, Wisconsin 54911

Dear Mr. Harris:

Re: Lehrer Landfill

The Department of Natural Resources Solid Waste Management Section has received and reviewed the following geotechnical information on the Lehrer landfill:

1. The January 26, 1976 boring log information received February 2, 1976.

2. A summary of constant head permeability tests received February 12, 1976.

3. A summary of water level observations received Februry 20, 1976.

Pursuant to a review of that information, a meeting was held on March 1, 1976 at the Department of Natural Resources office in Oshkosh at which representatives of Soil Testing Services and the Department of Natural Resources,met to discuss the Department's review of the information and the course of action to complete the re-engineering of this landfill in a timely manner.

Based upon a review of the submitted information as delineated above and our meeting of March 1, 1976, the Department of Natural Resources has determined the following:

1. The soils at said facility seem to be uniform, homogeneous, silty clay materials with coefficients of permeability ranging from 4.9×10^{-9} centimeters per second to 1×10^{-8} centimeters per second. This delineates the sub-surface soils environment to have excellent potential for continued operation.

2. Regarding the hydrogeologic environment, it appears that the bedrock and bedrock aquifer are located at depths of approximately 100 feet below grade at the facility. This rock is overlain by the soils described in number one above and, therefore, sufficient depth of surficial soil deposits can be maintained easily above the bedrock aquifer. Regarding the shallow ground water flow, the water levels appear to be at elevation 680-690 underlying the proposed disposal areas flowing generally east. With the proposed base of the facility on a preliminary basis of 696 feet, plus or minus, at the lowest point, sloping upwards for drainage from there, this would allow adequate separation above the ground water table in that area. However, based upon our review, it appears that the actual shallow ground water levels may not yet be defined and, therefore, three shallow ground water table observation wells at B-3, B-1, and B-5 shall be installed. These would be approximately 20 feet deep and construction would be simply drilling the hole, no logs necessary, installation of a slotted pvc pipe-sealed at the surface, hole to be backfilled with sand up to the bentonite seal at the surface, etc. Once these water levels are read, this will allow a better definition of the shallow ground water flow system which is needed to determine the final design of the landfill.

3. No exact definition of the in-place refuse has been given. This will not be necessary in this case based on the hydrogeologic environment as defined thus far. A general definition of the filled areas is indicated and no surface leakage or leachate has been observed. It will, however, be necessary to install a leachate level and quality monitoring well through the old refuse fill. This should be in the present trench area being filled at a point where final grade has been reached and the well can be protected. This well and readings therefrom will be an essential part for determining some of the final design concepts for the proposed active areas under consideration now. At the present time, no additional information or work other than final abandonment will be necessary on that area that has been filled and covered as indicated on preliminary drawing 6148A dated February 9, 1976 from Soil Testing Services of Wisconsin, Inc. With the refuse boring in the present fill site and monitoring B-6 and B-4 piezometer nests for quality on a schedule to be set up at a later time, it should be sufficient to monitor the effect at this time of the old landfill area on a surrounding environment. Additional wells and/or documentation may be necessary at a later date; however, at this time, there will be no additional requirements for that area other than abandonment.

4. Regarding design concepts at the facility which have not been submitted formally but were discussed at our March 1, 1976 meeting, the following comments can be offered:

a. The concept of three feet of final cover and twelve inches of topsoil is a good one; however, based upon the proposed final uses and agricultural land, additional thickness of final cover should be considered.

b. Covering with papermill sludge as daily cover, which was proposed on a preliminary basis, is unacceptable at this time. The Department of Natural Resources will consider any formal requests at a later date for use of this material provided they are formalized with a testing procedure and quality control in the field.

c. Proposal of a 30-40 foot excavation to base grade is acceptable at this facility under a modular concept which delineates approximately six to ten cells.

d. Ground water collection may be required dependent upon the shallow ground water observation wells at this facility.

e. A leachate collection system will be required at this facility. The complexity and intent of that system will be decided once the shallow ground water flow system is better defined. It may vary in concept at this time from a 15 foot by 15 foot, five foot deep, sump with a riser; to an entire perimeter leachate collection pipe with several outlets to the surface. The Department will require at least a minimum leachate extraction system at the facility. The decision on complexity will wait until the shallow ground water flow system is better defined and the monitoring well within the present fill trench is installed and results are obtained. In the meantime, additional excavations will not be required to have a leachate collection system installed at the base but may have to have an extraction system installed depending upon the results in the present fill area.

f. The surface water diversion systems as presented on March 1, 1976 at our meeting were good in concept; however, the design must include a lined surface water drainage swale or two which carry the water from the west over the eastern fill area to Kankapot Creek.

g. The final grade concept of bringing the facility back to approximately original grades is sufficient for this facility.

h. The private wells in the area were defined by you at the meeting, and their locations should also be submitted with the final feasibility study and preliminary engineering plan.

In summary, the Lehrer facility as defined to date appears to have excellent potential for continued operation. As you are aware, Mr. Lehrer is under a time schedule to complete the re-investigation and re-engineering of this facility in accordance with Order Number 2A-75-1045. As discussed at our meeting, based upon your progress thus far to complete the hydrogeologic feasibility study and preliminary engineering plans, the Department is willing to extend the time deadlines in that order in keeping with our agreements on March 1, 1976. That was to have the hydrogeologic feasibility study and preliminary engineering concepts submitted by March 12, 1976. The Department would then agree to review that within a 30-day time period and forward comments to you directly. Based upon that, the Department would anticipate receiving the preliminary engineering plans and finalized hydrogeologic reports by

May 28, 1976. Lastly, the Department would review that within a 30 day time period and 30 days thereafter, plus or minus, final engineering plans would be required. If that time schedule is acceptable to you, we would like to receive formal notification of that fact and the Department would process that extension expeditiously.

Again, let me thank you and Soil Testing Services for meeting with us on March 1, 1976 and with a little effort on everyone's part, we are sure Mr. Lehrer will have an excellent, well-designed landfill in the near future.

Sincerely,
Bureau of Air Pollution Control
and Solid Waste Management

RG

Robert T. Glebs, Engineer
Solid Waste Management Section

Earl P. Updike /css

Earl P. Updike, Hydrogeologist
Solid Waste Management Section

RTG:ss

cc: Gary Kulibert - Lake Michigan District
Timothy Dahlstrand, Soil Testing Services of Wisconsin, Inc.
James Lehrer

00793